



AMENDMENT TO THE SPECIFICATION

Please replace the paragraph beginning on page 1, line 27 to page 2, line 15 with the following amended paragraph:

Speech recognition systems have therefore been proposed to assist in the call routing process. However, such speech recognition systems has have also relied on a prompt-response mechanism in which the caller must respond to predetermined prompts. For example, the system may request that the caller state the caller's name and/or state a predetermined word or sequence of words representing the subject matter of the call or the identity of the desired recipient. Again, these systems are effective only if the caller is truthful when responding to the predetermined prompts. Also, the speech recognition models that are used to determined the content of the speech must be able to accurately segment the content given a wide range in voice input characteristics for different callers. Such systems can therefore remain time consuming or inaccurate and can be easily circumvented by uncooperative callers.

Please replace the paragraph beginning on page 19, line 23 to page 20, line 11 with the following amended paragraph:

When training an acoustic model, such as when training the generic model or updating a caller-specific model, it is assumed that the acoustic input WAV and therefore the sequence of feature vectors $O[k]$ ~~in~~ is known. Speech recognizer 107 (or caller identification module 112) generates a model ($P'[ij]$ and $B'[i]$ for each state) that yields the highest probability of observing the $O[k]$ output sequence for each phoneme. For example in one embodiment, caller identification module 112 uses a Baum-Welch HMM reestimation method for updating or otherwise adapting the generic acoustic model to reflect the characteristics of a particular speaker. For example the acoustic model for a particular speaker can initially include the generic HMM models of the generic acoustic model, and then the HMM models for the phonemes that occur in the present call can be updated to reflect the speech characteristics of the caller by the

Baum-Welch HMM reestimation method.

Please replace the paragraph appearing page 30, lines 3-26 with the following amended paragraph:

The use of caller-specific language models to identify a caller will identify semantic similarities of the content of the current call to one of the caller-specific language models LM[i]. However, it ~~maybe~~ may be the case that the current caller is a different caller (not caller “i”) who talks about the same subject matter that caller “i” talked about. Therefore, caller-specific language models are preferably used in conjunction with caller-specific acoustic models for properly identifying unique callers. For example, the acoustic caller identification process shown in FIG. 7 can be weighted more heavily than the language model caller identification process trained in FIG. 9 when reporting a result to the identification system. For example if the two identification methods produce different results, the language model detection result will be used only if it has a much higher probability than the caller-specific acoustic score of the highest scoring acoustic model. Again, the system user or operator of the call center can override any classifications made by either the acoustic model identification subsystem or the language model identification subsystem.